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ABSTRACT

This is the executive report of a study which evaluated the Television Reading Project, an instructional program based upon current television programs designed to increase reading skills of students. The major goals of the evaluation were to assess the effects of the project on reading skills, acceptance of the materials by teachers and students, and effects of the materials on classroom behavior of teachers and students. The evaluation was conducted in Chicago, Dallas, Minneapolis, and several small area school districts. It was found that those students who used the materials scored approximately ten percent higher on reading comprehension skills as measured by a criterion referenced test than the control groups. Scores on standardized, norm referenced tests routinely used by the districts revealed no significant gains in comprehension. Teachers described use of the materials and 85 percent indicated a strong interest in using the materials again. Several behaviors which were linked to reading achievement by past research were observed during a classroom observation in which materials were/were not being used. The observation data suggest that teacher and student behaviors were affected in directions consistent with increased reading achievement by the use of these materials. (Author)

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AN EVALUATION OF THE TELEVISION READING PROJECT

EXECUTIVE SUMMARY

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Project Period: September 15, 1978 - October 31, 1978
Report Period: September 15, 1978 - October 31, 1978

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Executive Summary

Acknowledgments

The Project Director would like to express heartfelt thanks to the energetic and meticulous people who made this project possible. To Ann Lamiell-Landy, whose knowledge, dedication, and thoroughness continually elevated the standards of the product goes a special thanks. Jerry Reid provided expertise in measurement and statistics and got us off to a good start. Site coordinators who labored long include Penny Sebring and Elaine Smeltz. Latecomers who quickly grasped the goals of the project and filled in admirably include Terry Bahn, Ann Kochenberger and Jane Clark.

Grateful acknowledgment is also extended to the School Districts of Bullhead City, Arizona; Chicago; Dallas; Minneapolis; Mount Vernon; and Pinellas County, Florida. The personnel listed below gave freely of their time and effort to further the cause of this evaluation.

Peg O'Shaughnessy, Cyrus Yesner, Dr. Charita Chapman, Birdie Miller, Ruth Cafarella, John Blank, LuOuida Phillips, Betty Jackson and John Griffin coordinated the distribution and collection of program materials and evaluation questionnaires.

Lary Johnson, Marion Rice, Thomas Tocco, and Robert Grobe assisted in the transfer of achievement data to the evaluation.

Abstract

The Television Reading Program (TVRP) is a supplemental reading instruction project which is based upon commercial television programs aired at prime time. Scripts of TV programs with high popular appeal for youth serve as the basis for instructional activities designed to enhance reading achievement in upper elementary through lower high school grades. This document is an evaluation report based upon several types of data collected during the 1978-1979 school year.

The evaluation was conducted by the Center for Education Research and Evaluation of The Pennsylvania State University and addressed the following questions. What effect does the TVRP have upon reading achievement? Is student motivation and behavior enhanced by using the program? Do teachers view the program materials as beneficial and do they use them constructively?

School districts in six sites, including Chicago, Dallas, Minneapolis, and Pinellas County, Florida, agreed to use the TVRP materials and to provide specific evaluation data. Site coordinators were selected and provided excellent service, considering the personal rewards.

In all cases, a set of teachers who did not use the TVRP was identified to serve as a control. In one site, TVRP and Non-TVRP teachers were randomly selected from all volunteers. In two other sites, a carefully matched sample of nonvolunteers was drawn. Since teachers were sampled, classroom mean scores were used as the unit of analysis.

To estimate the effect on reading achievement, four of the sites provided access to appropriate reading test scores from standardized norm-referenced tests used as part of their regular district testing program. Three of the sites, including Minneapolis and Chicago, agreed to administer an objective-referenced test constructed by the California Test Bureau. The TVRP group scored ten percent higher than the group using their district program on the latter test and seven of its nine subscales. No differences were observed on the norm-referenced tests. The TVRP clearly enhanced the reading achievement skills it was designed to address.

Student motivation was assessed through self-report data provided on a reading questionnaire and through observation of TVRP and Non-TVRP classes using an instrument specifically designed for reading achievement. The findings of the self-report data suggest equality between TVRP and Non-TVRP classes. Data gathered by trained observers, however, suggest strong differences favoring the TVRP group. For example, a higher frequency of interaction between teacher and student was observed in TVRP classes compared with Non-TVRP classes. Given the history of errors documented in teacher judgment, the results suggest strong effects in desired directions favoring the TVRP group.

TVRP teachers completed evaluations of three of the seven lessons. From these evaluations, modest evidence emerged to suggest that the materials: (1) are popular, (2) fill a need, and (3) depend upon the actual script used for appeal. Also noted

were some geographic and grade level preferences for script choice. Some concerns centered around prompt delivery of lesson materials, editorial errors, and match between readability and class reading levels.

The evidence suggests that the TVRP enhances specific reading achievement skills, results in improved classroom behaviors, and constitutes a useful set of supplemental materials that address reading achievement, a major problem in today's schools.

Executive Summary

Television viewing has been recently implicated as a major deterrent to reading, especially among children. Studies indicate that as TV viewing increases, scores on tests of reading achievement decline. The problem is one of major proportion for educators. A supplementary reading instruction program has been developed by Capital Cities Communications, Inc. which is designed to make use of interest in television to improve the reading skills of upper elementary and junior high school students. The Television Reading Program uses the scripts from popular television shows as reading text and provides companion vocabulary and comprehension skill exercises which draw on the unique characteristics of the script to expand word knowledge and improve understanding. Copies of these script-exercise packages are provided monthly for individual students and arrive at the schools approximately two weeks before the television program is broadcast. This means that the student who use the materials know the plot and outcome of a popular TV show before it is aired and in this way interest in television serves to motivate rather than inhibit reading.

Capital Cities underwrote a two-year project to develop the Television Reading Program (TVRP) which included extensive evaluation research on the characteristics of the classes who used the materials, the properties of the instructional materials themselves (e.g., the specific reading skills they address), the effects of the program on test performance and instructional events, and the appeal of the materials for teachers and students.

This evaluation research was carried out in two phases. The results of the first phase are summarized elsewhere (Barnette, Szabo and Lamiell-Landy, 1978). The second phase addressed the following questions.

1. What are the demographic and instructional context characteristics of the classes who chose to use the materials during 1978-79? What are the instructional characteristics of the TVRP materials which were used during this time?
2. How does the use of the Television Reading Program (TVRP) affect performance on tests of reading skills?
3. What changes occur in instructional events when the TVRP materials are introduced?
4. Do teachers who use these materials find them useful and appealing? Are they willing to continue using them?

Six school districts from various parts of the country were selected to serve as sources for evaluation data. Minneapolis, Chicago, Mount Vernon (New York), Pinellas County (Florida), Dallas, and Bullhead City (Arizona) school systems agreed to identify classes who would use the materials for one year and provide data for the evaluation research to answer the above questions.

Results

The research findings are described separately for each of the four major issues examined by the evaluation.

Characteristics of the Sample Classes and Program Materials

Demographic and instructional context data were obtained either from questionnaires completed by teachers or from the school district's internal records.

Sample classes. The six school districts who participated in this research represent a geographic, economic and ethnic cross-section of the United States. Sites are located in the Northeast, North-Central, Southeast, and Southwest. The economic status index (based on the number of free lunches provided) varied from 19% in Pinellas County to 100% in Bullhead City. The percentage of minority students in participating classes varied from 15% to 65%. Pinellas County had the fewest number while Chicago had the largest number. Males outnumbered females in all participating classes.

The instructional context also varied from site to site. The average length of teaching experience ranged from two to fourteen years. The average for all teachers over all sites was 9.8 years. Class size averaged 27 students, class structure ranged from self-contained to semi-open to completely open and classes were both heterogeneously and homogeneously grouped for ability. A high proportion of students were reading below grade level. The proportion was especially high for the junior high classes.

In summary, the classes involved in the evaluation research varied widely in geographic, demographic and instructional context characteristics. The teachers who participated in the study had varying levels of experience, wide ranges of reading levels represented among their students, and they organized their classes in a variety of ways. This sample can then be expected to generalize to most other classes, except perhaps to those students of high reading ability or who are economically advantaged.

Program materials. The description of the program materials included an estimate of readability level and a content analysis of the exercises. The script reading levels ranged from grade three to grade five (based on the Fry method of calculation).

Seventeen different types of skill exercises were available for teacher use. A process-content analysis of these exercises showed greater emphasis on word meaning and word structure than on larger units of meaning such as sentences and paragraphs. Further, the materials placed greater emphasis on less complex cognitive skills, such as recall and interpretation, than on more complex skills such as translation and inference. Based on recent research findings (Bradley and Ames, 1977), the TVRP materials have readability levels which fall within the range of those found in intermediate and junior high basal readers and the skill emphasis is typical of other reading texts. The TVRP materials are therefore considered highly compatible with most basal reading materials. The TVRP materials were chosen by both inexperienced and experienced teachers. Thus it can be reasonably assumed that they will be attractive to most teachers.

Effects of the TVRP on Tests of Reading Skill

Standardized achievement tests which measure vocabulary and comprehension skills are an accepted index of reading ability. To test the effectiveness of the TVRP materials, standardized test scores provided by the data management offices in each site were examined comparing the average vocabulary and comprehension scores from TVRP classes with scores from Non-TVRP classes who were

carefully selected to make a valid comparison group. The two groups had comparable scores before the TVRP was introduced, except for Chicago, where Non-TVRP classes had superior scores. A comparison of scores after a year of TVRP exposure was thus considered legitimate. No differences were found at the end of the year, however, indicating that use of the TVRP does not affect performance on this type of test.

An alternative form of testing was also carried out. Based on a content analysis of TVRP script materials and teacher reports, six vocabulary and comprehension skills emphasized by the program were identified (Table 1). A test of these skills was developed by purchasing appropriate test items from the Objective Referenced Bank of Items and Tests maintained by McGraw-Hill Publishing Company. This skill-based test, tailored to complement TVRP instruction, was administered to TVRP and Non-TVRP classes in Minneapolis and Chicago. The TVRP classes from both cities scored significantly higher on seven of nine subscales and on the total test, indicating that the test performance of the TVRP students on a number of specific vocabulary and comprehension skills is improved when the TVRP instructional package is used to supplement the existing reading instruction. TVRP students showed exceptional strength in the ability to use context clues to identify word meaning, a skill which received heavy emphasis in the program materials. The superior performance of the TVRP students is especially noteworthy since the skills tested are incorporated to some degree in all reading instruction programs and the Non-TVRP

Table 1
Correlation Between Six Objectives of the TVRP
and ORBIT Subscales and ORBIT Test Items

ORBIT Objective	Subscale	ORBIT Objectives	TVRP Objective	Subscale	ORBIT Objectives
1. Given a sentence containing an underlined word and a choice of four words the student will identify synonym for the underlined word.	1	Objective 17a	4. Given a paragraph to read, students will be able to identify the main idea(s) from a number of alternatives.	7	29a
2. The student will use context to identify words that best complete incomplete sentences.	2,3,4	Objectives 20,21,22	5. Given a reading passage, students will use story clues to identify the answer to a question that require an inference or conclusion to be drawn.	8	29b
3. Given a paragraph to read, students will be able to answer literal recall questions correctly.	5,6	Objectives 25,25b	6. Given a passage to read, students will be able to identify descriptive words that define attributes of a person or the emotions experienced in the passage.	9	33b

classes were in all likelihood receiving instruction in these same six skills with the standard instruction material. Of the nine subskills listed by Davis (1944) as components of comprehension, six are emphasized by the TVRP and were explicitly tested.

It should also be noted that the observed difference in total scores of two points is considered educationally as well as statistically significant according to the criterion stated by Tallmage and Horst (1976) who argue that the convention for identifying an educationally important difference is one which equals or exceeds one-third of a standard deviation.

The discrepancy between the standardized and objective-based test results may be attributable, in part, to differences in test design. Standardized tests are more global in focus, measuring a wider range of objectives than those found in the TVRP. The correct response to a single item may require more than one skill. The objective-based test measures only those skills which received instructional emphasis which makes this test a more precise assessment of the student's learning experiences.

Effects of the TVRP on Instructional Events

Questionnaire and observation data were collected to assess the impact of the TVRP materials on a number of instructional events which occur in reading classes and which have shown strong relationships with reading achievement in previous research. The familiarity and popularity of the script materials was expected to promote attentiveness and task involvement (positively related

to achievement) and discourage behavior disruptions and reading errors (negatively related to achievement). The questionnaires asked the teachers to give quantitative estimates of the target activities for both the regular instructional materials (early in the year) and the TVRP materials (later in the year). For example, teachers were asked to indicate the percentage of students who gave more information than was asked for and the number of times the lesson was interrupted to ask students to stop talking. Soliciting teacher self-report data is an indirect method of measuring change in instructional events. The direct method consists of coding student-teacher interactions during classroom observations and developing scores for the critical instructional events from the coded data. Codings are based on a low inference scale for which observers were trained. For example, scores were calculated for the number of extended responses given by students and the number of interruptions for discipline.

In order to provide comparison data, Minneapolis Non-TVRP teachers responded to the questionnaires and three of these teachers were also observed. TVRP data from the March Reading Questionnaires were expected to show an increase in those events positively related to reading achievement, a decrease in negative ones compared with October, and to show a more positive instructional climate than Non-TVRP teachers reported. It was expected that the observation data would show a similar advantage for the TVRP classes.

Reading Questionnaire data did not show the expected increase in positive events between October and March except with respect to enthusiasm for the instructional materials. Non-TVRP teachers also reported an increase in student enthusiasm over the same interval precluding any inference about TVRP impact. Essentially, the Reading Questionnaire results are not supportive of the TVRP. In contrast, classroom observations conducted in six Minneapolis sixth grades found higher incidence of positive activities, such as reading aloud, student initiated interactions, exchange of social comments, teacher praise and task involvement in the TVRP classes, and lower incidence negative activities such as correction for errors, and time spent by the teacher either working alone or organizing the lesson. These results, although based on a small number of classes, give support for positive TVRP effects for instructional events.

One can speculate as to the reason for the obvious conflict in questionnaire and observation results. Recent research on the response accuracy of teachers to questionnaire items (Hook and Rosenshine, 1979) indicates that teachers are not accurate in reporting what transpires during teaching except when making comparative judgments. No frame of reference was provided for the Reading Questionnaire judgments which might have improved the response accuracy. Social desirability may also be a factor in the response pattern such that teachers may distort reality somewhat in order to appear as they think they should.

While classroom observations tend to be the more valid estimates of classroom events than self-report questionnaires (Mitzel, personal communication), the data presented here are tentative due to the small number of classes observed. Definitive findings needed to resolve the discrepancy between the Reading Questionnaire and observation results which would clarify the nature of the TVRP effects would require observation in more than six classes. Sampling problems aside, the observation data do suggest that the TVRP improves the instructional climate on a number of dimensions which are related to reading achievement.

Teacher Opinion of Program Materials

Questionnaires distributed to TVRP teachers three times during the year asked for information about student response to the materials and the way in which the script and exercises were used. In general, the first script (from a Spiderman program) was seen as less interesting and less valuable than either of the other two scripts (Happy Days and Mork and Mindy). All three scripts were read and discussed by a majority of the classes and a very high proportion of teachers reported that the script materials were both appropriate and appealing to their students. These findings about the interest and appeal of the materials should not be taken lightly in view of current research which documents higher reading comprehension scores for high interest material (Asher, et al., 1976). Of the seventeen exercises available for teachers to use, most teachers chose those dealing with word meaning (particularly use of context clues) and word

structure (synonyms and/or antonyms) rather than exercises in classification, drawing inference and drawing conclusions. The more complex comprehension exercises were not heavily utilized, but teachers did express the desire for many analogy exercises, which are complex.

It is interesting to speculate about why teachers use some types of exercises rather than others. The process-content analysis of the script exercises described in the first section agrees with the Program Questionnaire response pattern. That is, the exercises used most heavily were the ones most frequently provided in the script booklets. A positive relationship between the availability of exercises and their use is logically consistent. However, it is also true that the exercises used most frequently are simple to answer and to score, and students should be more capable of coping with them independently, making it easier for teachers to monitor completion. In addition, it was noted by the evaluators that vocabulary exercises always precede comprehension exercises in the booklets. If teachers lack time to complete all available activities, they will probably omit the last ones rather than the first ones. It is possible that the use of various types of exercises depends heavily on their arrangement in the booklets.

The space on the Program Questionnaire which was available for teacher comments was used liberally by the teachers. They most often complained that there was too little time to complete the activities, either because the materials were delivered too

late or because the scheduled instruction activities took precedence over the TVRP.

Teachers were asked if they wished to continue using the materials in the future. Of those who answered the question, 85% answered "yes," 12% answered "no," and 3% were unsure. This reflects strong program appeal and seems to forecast a substantial market in sites similar to those participating in this study.

Discussion

In summary, it has been demonstrated that the TVRP is an effective instructional tool which results in improved scores on an objective-based test of reading skills and appears to promote a greater incidence of positive instructional events when it is in use. The research data are based on a representative sample of classes in the United States whose teachers report that the TVRP materials are interesting to their students and have a high instructional utility. Eighty-five percent of the teachers wish to continue using the materials.

Salient Findings for Prospective Adopters

School system administrators considering the use of the TVRP will be able to use a number of the research findings when making a decision about the program.

Use of the TVRP improves learning in specific skill areas when an objective-referenced test is used as the criterion measure although these score differences do not appear on norm-referenced tests. The number of skills addressed by the TVRP materials is

limited, but the exercises are attractive and are highly utilized by the teachers which probably contributed to the instructional effects mentioned above. The reading level estimates of the scripts are low enough that most intermediate and junior high students can cope comfortably with the materials. The results of classroom observation suggest that the learning atmosphere is much warmer and information is exchanged at a higher rate when the TVRP materials are being used. More time is spent actively engaged with the lesson materials as well. However, these findings must be replicated before they are considered firm.

Teachers from a wide variety of ethnic, economic, and instructional circumstances used and liked the program materials. A large majority of the teachers sampled considered the scripts appropriate and appealing. The strongest endorsement of the program value is the number of teachers who wish to continue using the materials (85%). The only groups for whom the materials may not serve a need are the very able readers or the economically advantaged groups. None of the evaluation data are appropriate to these groups.

The major objections to the program are late delivery of script materials, lack of time to complete suggested activities and inaccurate exercises. As supplementary instruction, the TVRP must follow the primary curriculum in importance and teachers report that the time commitment needed to complete the reading, discussion and skill exercises is too great. These complaints have appeared during both years of evaluation work, so it is

logical to assume that they will be continuing problems, although they do not appear to be serious enough to convince the teachers to discontinue use of the program. The freedom to select activities may in fact be quite useful in tailoring the materials to individual classes if theachers receive instruction in selection strategies.

Recommendations

Based on the evaluation research results some changes in the TVRP are considered desirable. Recommendations are specific to the materials themselves, distribution procedures, and evaluation.

Materials

Errors in printing and exercise development should be eliminated through careful proofreading and checking. This would remove a major source of annoyance to teachers.

A useful addition to the TVRP would be teacher-administered pre- and posttests for use in September and June which would assess progress on skills emphasized during the intervening nine months. The knowledge that such a test would be useful should encourage completion of the available exercises each month. Some additional emphasis should be placed on more complex skills. The order in which vocabulary and comprehension exercises are presented should vary from script to insure that every skill receives practice even if the teacher does not have enough time to complete all the exercises.

Once the content-process distribution of the exercises has been specified, the relationship or fit between the TVRP materials and basal reading instruction materials should be determined. The same procedure can be carried out for the major tests of reading ability. The product of such an analysis would be the number of TVRP objectives which are represented in each text series or test, and the relative emphasis given to each (e.g., the number of items per objective). Such a list would enable teachers who are using the materials to clearly understand when the TVRP will reemphasize some skill receiving attention in the core instruction, or to see what the TVRP provides that is not found in the standard materials. The test-mapping information would allow the teacher to anticipate the exact areas which would be most sensitive to TVRP instruction.

The content analysis of the script exercises condicted during this research indicates that skill and content coverage are narrow but well defined. Since the objective-referenced test scores reflect the availability and teacher use of skill exercises, an expansion of the scope of the skill building exercises should lead indirectly to improved test scores. If the exercises are keyed to the norm-referenced tests, perhaps norm-referenced scores will improve. An expansion, however, has implications for continuation as a supplementary program versus becoming a major program.

Teachers should receive some guidance in using the materials before introduction for classroom use. This could be provided

by training sessions carried out in each district by teachers who are experienced in use of the TVRP, or by providing video tapes which demonstrate effective and ineffective use of the TVRP materials. Such an orientation would maximize utilization from the beginning of the year.

Finally, by incorporating classroom teacher judgments in script selection, Capital Cities may be able to avoid choosing programs of limited instructional applicability. Some attention should be paid to the desired readability level as well. Phase I evaluation results found few complaints among teachers that the materials were too difficult to read in spite of the fact that the readability grade level estimate for three scripts was grade six.

Distribution

Late arrival is a major complaint among program users. A number of alternatives for distributing materials should be investigated, including electronic transmission procedures. The evaluators found that indirect distribution of evaluation forms (through central offices in school districts to buildings and then to teachers) helped avoid errors as the distribution process was monitored by administrative personnel. Direct mail to schools was more likely to be lost or late.

Research Recommendations

Additional research is recommended which would clarify some unexplained results and further define the effects of the TVRP.

Differences in program use at the intermediate and junior high grades should be explored in more detail. Interviews and observations of junior high teachers should be used to determine if the TVRP materials are primarily appropriate for poor readers and if the lower reported usage of the materials is related to the demands characteristic of junior high instruction or to the utility of the materials themselves.

The observation activities conducted in this research should be replicated with larger numbers of teachers for several consecutive days in a site which is easily accessible.

Achievement, observation and program use data should also be gathered in classes not represented in the current sample such as high ability advantaged students, special education and remedial classes, and adult education groups.

The question of why the TVRP is capable of enabling students to reach certain reading objectives is not a trivial issue and should be addressed. Does it work because the popular materials format (prime time youth oriented, TV programs) interests and motivates the students, which, in turn, somehow results in enhanced learning? Is it because the instructional activities are highly appropriate to learning (e.g., match with cognitive styles of the students)? Would other media such as newspapers work as well? Or is it simply that efficient instruction results from the narrow focus (six objectives) of the TVRP as opposed to the greater number of reading objectives addressed in other instructional programs?

A Final Note

The urgency to market an educational product and the need to understand what that product does and does not do are clearly in conflict. The education market contains an appalling flood of inappropriate materials which were placed on the market too soon. Capital Cities is to be commended for investing heavily in evaluative research on the TVRP and for insisting on having a solid foundation for any future claims about the TVRP effects.

Bibliography

Asher, S.R., Hymel, S., & Wingfield, A. Children's comprehension of high- and low-interest materials and a comparison of two close scoring methods. November 1976. (ERIC Document Reproduction Serial No. ED 134 939)

Barnette, J., Szabo, M., & Lamiell-Landy, A. An Evaluation Report of the Television Reading Program, Center for Education Research and Evaluation, The Pennsylvania State University, 1978.

Bradley, J.M., & Ames, W.S. Readability parameters of basal readers. Journal of Reading Behavior, 1977, 9 (3), 1975-183.

Davis, F.B. Fundamental factors of comprehension in reading. Psychometrika, 1944, 9, 185-197.

Hook, C., & Rosenshine, B. Accuracy of teacher reports of their classroom behavior. Review of Educational Research, 1979, 49 (1), 1-12.

Tallmadge, G.K., & Horst, D.P. A procedural guide for validating gains in educational projects. RMC Research Corporation, Mountain View, CAL., 1976. Government Printing Office, Number 0-73-6662.